

Technical Information

Converting Measurements

If you have ever been stumped trying to compare microns and mils, or inches and centimeters, this chart will solve your problems. It is set up so that if you have an existing number and a calculator, you can easily convert one measurement unit into another. For example, if you have a measurement in mils, multiply it by 25.4 to get microns. Every unit is in order of size, from the smallest to the largest: micron, mil, point, millimeter, pica, centimeter, inch.

¹There are exactly 72 PostScript points in an inch. Some confusion may occur between PostScript points and conventional points. There are slightly more than 72 conventional points in an inch. There is even some disagreement on this. Some sources list 72.27 while others list 72.307 as the number of conventional points in an inch. As a result there are also slightly more conventional picas (6.0225 or 6.0256, depending on the source) in an inch.

If you have:	Multiply by:	To get:
Microns	.03937	Mils
Microns	.002835	Points
Microns	.001	Millimeters
Microns	.000236	Picas
Microns	.0001	Centimeters
Microns	.00003937	Inches
Mils	25.4	Microns
Mils	.072	Points
Mils	.0254	Millimeters
Mils	.006	Picas
Mils	.00254	Centimeters
Mils	.001	Inches
Points ¹	352.78	Microns
Points	13.89	Mils
Points	.3528	Millimeters
Points	1/12 or .0833	Picas
Points	.0353	Centimeters
Points	1/72 or .0139	Inches
Millimeters	1,000	Microns
Millimeters	39.37	Mils
Millimeters	2.835	Points
Millimeters	.236	Picas
Millimeters	.1	Centimeters
Millimeters	.03937	Inches
Picas ¹	4233.32	Microns
Picas	166.67	Mils
Picas	12	Points
Picas	4.2333	Millimeters
Picas	.4233	Centimeters
Picas	1/6 or .1667	Inches
Centimeters	10,000	Microns
Centimeters	393.7	Mils
Centimeters	28.35	Points
Centimeters	10	Millimeters
Centimeters	2.36	Picas
Centimeters	.3937	Inches
Inches	25,400.05	Microns
Inches	1000	Mils
Inches	72	Points
Inches	25.4	Millimeters
Inches	6	Picas
Inches	2.54	Centimeters

You may also interpret the chart in the following way. For example, instead of saying: If you have inches multiply by 2.54 to get centimeters, you can say in one inch there are 2.54 centimeters. This will help if you try to convert a measurement in dots per inch into dots per centimeter:

$$1270 \text{ dots/ inch} = 1270 \text{ dots}/2.54 \text{ centimeters} = 500 \text{ dots/centimeter}$$

Fractions and decimals

Another conversion table that may be useful to you contains some common fractions and their decimal equivalents. This will come in handy when you are working in a page layout program and are looking at a measurement like 3.1345. Using this list you can at least see where it falls in the world of fractions (in this case it would fall between 3 1/8 and 3 9/64.) Here is the list:

Fraction	Decimal	Fraction	Decimal
0	0.0	1/2	.5
1/64	.015625	33/64	.515625
1/32	.03125	17/32	.53125
3/64	.046875	35/64	.546875
1/16	.0625	9/16	.5625
5/64	.078125	37/64	.578125
3/32	.09375	19/32	.59375
7/64	.109375	39/64	.609375
1/8	.125	5/8	.625
9/64	.140625	41/64	.640625
5/32	.15625	21/32	.65625
11/64	.171875	43/64	.671875
3/16	.1875	11/16	.6875
13/64	.203125	45/64	.703125
7/32	.21875	23/32	.71875
15/64	.234375	47/64	.734375
1/4	.25	3/4	.75
17/64	.265625	49/64	.765625
9/32	.28125	25/32	.78125
19/64	.296875	51/64	.796875
5/16	.3125	13/16	.8125
21/64	.328125	53/64	.828125
11/32	.34375	27/32	.84375
23/64	.359375	55/64	.859375
3/8	.375	7/8	.875
25/64	.390625	57/64	.890625
13/32	.40625	29/32	.90625
27/64	.421875	59/64	.921875
7/16	.4375	15/16	.9375
29/64	.453125	61/64	.953125
15/32	.46875	31/32	.96875
31/64	.484375	63/64	.984375
1/2	.5	1	1.0

Note: You may notice that your page layout program changes its dimensions in .014" increments. This is approximately a point.

Temperature

And last but not least, here are the formulas for converting between degrees in Fahrenheit and in Celsius (centigrade):

$$\text{Fahrenheit} = (1.8 \times \text{Celsius}) + 32 \quad \text{Celsius} = (\text{Fahrenheit} - 32)/1.8$$

You may find this information useful for calculating temperatures for your film processor baths.

Comments

Please direct any questions or comments to:

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